HAWAIIAN GAZETTE

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CHARLES S. CRANE, Manager.

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THE STORY OF THE INCANDESCENT

Thirty-five years ago today, Thomas A. Edison produced the first successful incandescent lamp. To fully appreciate the importance of this wonderful invention one must go back to those days when household electric lighting was deemed impossible by the world's greatest scientists, when the only illuminants were candles, oil lamps and now and then a gas plant in the larger cities. Street lighting was not seriously attempted, stores and shops were not illuminated after closing hours and only a few small oil lamps and flickering candles served to illuminate the household after dark.

Those were strenuous days for Mr. Edison. Besides the enormous amount of work entailed by the operations of his manufacturing shops, he was elaborating the engineering plans for the first central station in New York City, covering carefully every detail; he was turning out several new inventions every day; and helping the Board of Fire Underwriters formulate rules for the new art of incandescent lighting. He was also working on the innumerable details relating to isolated electric lighting plants, for which there was beginning to be a demand; he was directing the engineering and construction work of his electric railway out at Menlo Park. He was working about twenty hours a day at this time. He seemed to be utterly oblivious of the every day things of life. When he seemed to need new clothes, his secretary would order them and have them delivered to Mrs. Edison. When they arrived she would wait until he had gone to bed and then change all his things over from the old suit into the pockets of the new ones and leave that in place of the old suit. He would put it on next morning and just as likely as not go down to the machine works or elsewhere and get the new clothes covered with oil or chemicals.

Previous to 1881, the general public did not know what an incandescent lamp was. An engine and dynamo had been placed in the basement of Edison's office in Fifth Avenue, and the house was wired and fitted up with lamps and fixtures for the purpose of educating the public.

It was a matter of years before the general public acquired even a rudimentary knowledge of the art of incandescent lighting. This ignorance gave rise to a long list of most ludicrous incidents. The lamp works shipped some lamps to a customer, forwarding therewith the usual memorandum of shipment, which in this case read: "100 lamps, 110 volts." The customer returned the memorandum with this note written at the foot: "Lamps received but cannot find the volts in the package."

Developments in the new art of incandescent lighting came thick and fast from Mr. Edison in the early eighties. Improvement followed improvement with dazzling rapidity. The manufacturing shops were buzzing hives of industry. Real money, however, was a scarce commodity. Mr. Edison had been obliged to finance the organization of the shops himself, and in doing so had to a large extent mortgaged his future. There was some fearful and wonderful financing done when the payrolls of the four shops were made up at the week ends.

Late one summer afternoon in 1881, Mr. Edison was sitting in Major Eaton's office talking with him. The door opened and in came Mr. F. R. Upton, the manager of the lamp factory, which was then a small wooden building at Menlo Park. Mr. Upton was the one who, about a year previous to this time, had gone from Menlo Park to New York having on his arm a market basket containing all the incandescent lamps in the world.

"Hello! Upton," said Mr. Edison, "how are you making out?" "Fine," replied Mr. Upton exultantly. "We finished a thousand lamps today.

Mr. Edison said nothing but seized a pad of paper and figured for a few minutes. Then looking up, he said "In fifteen years you'll be making forty thousand a day."

As a matter of fact, the lamp factory was actually turning out about 45,000 lamps a day in 1896, and this number per hour is not unusual today.

MORE LIGHT ON WAR CAUSES

An important addition to the correspondence between the governments and the various foreign offices and ambassadors leading up to the outbreak of the War of Europe, which The Advertiser has been republishing during the past two weeks, has come in the form of the Russian Orange Paper, from which the part played by the Russians preliminary to the declarations of war is outlined. The Advertiser will include this Orange Paper in its reproductions.

A proper understanding of the political situation in Europe on the eve of the war cannot be had by the average man without a reading of this correspondence, which is official and authentic. By publishing the correspondence chronologically, with the British, German and Russian notes and exchanges as they come, a thoroughly impartial review of the ante bellum situation is given.

This correspondence, leading up to the greatest events of five hundred years, is extremely valuable to one who would have some clear idea of the immediate cause of the war, and in republishing it The Advertiser believes that it is serving its readers well.

TIME TO WAKE UP

The fact that the Republican ticket includes the names of one or two blacklegs hardly justifies the apathy with which the average Republican is viewing the election, coming within a few days. The average voter knows very well who upon that ticket is unworthy of support, just as he should know that the ticket, as a whole, shows an average decidedly higher than the ticket offered by the Democrats. The fourth district Republicans can very well afford to vote the Republican ticket for the county offices and for the house of representatives straight, and be glad of the opportunity of placing in office the men named. The average fourth district Republican can, also, very well afford to do a bit of public boosting for the county ticket and the house ticket. It will help a lot towards getting better government for Honolulu and for Hawaii.

The delegates to the Mexican constitutional convention must be having a real jolly time. They have been warned by Carranza that he will take repressive measures if they step on his toes, while Villa has eighteen thousand armed men in the near neighborhood looking after his interests. Everybody is watching and waiting, especially the former.

BEYOND THE EXCUSE OF IGNORANCE

Democratic ignorance of generally known facts may be advanced in excuse for a great many of the statements made and things done by the members of that party in Hawaii, but even Democratic ignorance cannot be brought forward to justify the misrepresentations being made by the writers and speakers of that party regarding the territorial immigration law and the presence in the Islands of Filipino laborers. The fact that the immigration of Filipinos into Hawaii is something with which the laws of the Territory cannot deal has been explained and explained over and over again, having been one of the issues of the campaign two years ago, and the truth of it cannot have failed to seep into the heads of even the local Democratic leaders.

Their present "literature," therefore, which continually and consistently informs the voters that the Republican immigration legislation is responsible for the presence in Hawaii of the Filipinos, can be explained only on the theory that the Bourbons believe that plain lying serves their purpose better than the truth. That there has been steady and studied lying over this question since the primaries cannot be denied.

Political events within the Republican party may have led the Democrats to the conclusion that truth unadorned with liberal fiction is unpopular with the average voter in Hawaii. But, whatever the reason for it, the Great Unwashed are giving the voters the finest selection of unadulterated lies this Territory has yet experienced.

TREATMENT OF PRISONERS OF WAR

Interest has been aroused in the rules of warfare governing the care and treatment of prisoners, Hawaii's keen interest having been aroused by the recent wirelessed despatches to this paper that the Germans are having some portions of their sugar beet crop harvested by British and French prisoners of war, in lieu of other men for the fields. This paper has also reproduced photographs of prisoners at work under guards, and the right of a nation to so employ prisoners of war has been questioned.

The law of the nations respecting war have been drawn up very carefully to cover these points. At The Hague Convention of 1907, the delegates agreed to seventeen rules respecting the treatment of prisoners of war, the articles being subsequently ratified by the various governments. The first six articles are:

Prisoners of war are in the power of the hostile government, but not of the individuals or corps who capture them.

They must be humanely treated.

All their personal belongings, except arms, horses, and military papers remain their property.

Prisoners of war may be interned in a town, fortress, camp, or other place, and bound not to go beyond certain fixed limits; but they cannot be confined except as an indispensable measure of safety and only while the circumstances which necessitate the measure continue to exist.

The state may utilize the labor of prisoners of war according to their rank and aptitude, officers excepted. The tasks shall not be excessive and shall have no connection with the operations of the war.

Prisoners may be authorized to work for the public service, for private persons, or on their own account.

Work done for the state is paid at the rates in force for work of a similar kind done by soldiers of the national army, or, if there are none in force, at a rate according to the work executed.

When the work is for other branches of the public service or for private persons the conditions are settled in agreement with the military authorities.

The wages of the prisoners shall go towards improving their position and the balance shall be paid them on their release, after deducting the cost of their maintenance.

The government into whose hands prisoners of war have fallen is charged with their maintenance.

In the absence of a special agreement between the belligerents, prisoners of war shall be treated as regards board, lodging, and clothing on the same footing as the troops of the government who captured them.

Prisoners of war shall be subject to the laws, regulations, and orders in force in the army of the state in whose power they are. Any act of insubordination justifies the adoption towards them of such measures of severity as may be considered necessary.

Escaped prisoners who are retaken before being able to rejoin their own army or before leaving the territory occupied by the army which captured them are liable to disciplinary punishment.

Prisoners who, after succeeding in escaping, are again taken prisoners, are not liable to any punishment on account of the previous flight.

Every prisoner of war is bound to give, if he is questioned on the subject, his true name and rank, and if he infringes this rule, he is liable to have the advantages given to prisoners of his class curtailed.

THE PASSING HOUR

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They are frank about it in Kohala, anyhow. A delegation of voters recently waited on a candidate for supervisor there and agreed to pledge him their votes if he, in turn, would pledge himself not to have any macadam roads built in the district. The reason advanced was that the fewer macadam roads the more work there would be for the citizen laborers in building the dirt ones over and over again.

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Link McCandless, having been turned down by President Wilson in his candidacy for the governorship, now proposes to go to Washington as Delegate to tell the President who to put in Governor Pinkham's place. As yet there has been no explanation as to how the man who couldn't get himself a job is going to get one for someone else.

* * * * *

Considering the fact that Kuhio is running at the head of the ticket which is being supported by the sugar interests it is rather surprising to know that he is devoting the greater part of his time in lamming the planters and in slamming Judge Ballou, the planters' agent at Washington, while in no public speech has he agreed to help preserve the duty on sugar or outlined a constructive plan for procedure at Washington to save the one big industry of the Islands. Kuhio is certain of reelection. Why, then, is he not at Washington trying to do something to help through the bill regarding the sale of the Mahuka site, to help through the Rapid Transit Franchise Bill, to lay the groundwork of the campaign for the retention of the present duty on sugar, or to do any one of a hundred things needed to be done at Washington for Hawaii?

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Six weeks or so ago The Advertiser warned the Delegate, the chamber of commerce and all others interested, of the danger pending of the loss of the lighthouse tender Kukui to this Territory and the immediate possibility of her replacement by one of the wornout tubs which a mainland district has got tired of. The Kukui was built especially for Hawaii, but is too good a ship to be left here when some other place with a real representative in congress wants her. Our warning fell upon deaf ears. Nobody bothered himself to look after Hawaii's interest, and in consequence a recent mail has brought orders to the Kukui skipper to get ready to leave Hawaiian waters for good, while notification has come of the sailing from the Coast of an inspector authorized to charter a local steamer to take up the lighthouse service work until the successor of the Kukui reaches here. There may be time yet to save the day, but we doubt it. The time to act was some weeks ago.

VON MOLTKE DYING

LONDON, October 23.—(Associated Press by Federal Wireless)—Field Marshal von Moltke, chief of the German staff, is dying from an affection of the liver, according to the correspondent of the Exchange Telegraph at Amsterdam.

The fact of the fatal illness of the great strategist is known only to a few, says the correspondent, every effort to preserve secrecy being made.

General von Moltke has left the Kaiser's headquarters, his place at the head of the general staff being taken by General von Falkenhayn.

FORTS AND GUNS IN THE WAR

The lessons for military men to learn from the bombardment and capture of the forts of Liege, Namur and Antwerp, and of the persistent holding out of the fortresses of the Verdun-Nancy line, are pointed out by the military critic of the Nieuwe Rotterdamsche Courant, who also gives a description of the German fortifications near Metz and Strassburg.

"The new German fortifications near Metz and Strassburg," he writes, "consist of small works surrounded by the usual obstacles (such as redoubts, trenches, moats and barbed wire entanglements). These forts are grouped and form units, each of which has its armored batteries (long range guns), and also sunken batteries of high-tracetory mortars. The intervening infantry positions are supported by small caliber field pieces.

"These forts are a few hundred meters apart and are connected with subterranean passages which lead also to the barracks beyond the range of artillery fire (making it possible to move troops into the positions without exposing them to the hostile artillery fire. In this case the arrangement is such that the enemy would have to take one small work after another, an operation which would cost many lives.)

"The speedy reduction of the fortresses Liege and Namur does not of necessity demonstrate that forts of their order have entirely lost their value, but it is certain that the 42-centimetre pieces are 'just the thing for them.' But against small forts with permanent 'tusschen-linien' (intervening military works), the fire from these guns, while terrible in effect, would not so quickly accomplish the results wanted. An additional factor in this is that the transportation of these heavy pieces is a difficult undertaking, which is also true of the necessary ammunition supply. To move these along an extended line of small forts is a heavy task."

From other sources it has been learned that fortifications of the type favored by General Brialmont would have served their purpose well had the Germans failed to provide themselves with the 42-centimetre pieces. It has been shown at Givet that the Austrian 35-centimeter mortar batteries, though smaller in caliber and of lesser force of penetration, suffice amply to reduce a unit fort in a little time. General Brialmont and the French military engineers, it is said, made the mistake of taking it for granted that the 21-centimetre gun of the Germans, and their own armies, were the last work in armament, having accepted that the steel they were familiar with could not stand a greater chamber-pressure. That a heavier piece would give more penetration than they calculated in their plans, they are said to have known, but they accepted that it would be impossible to transport such giants. In view of the fact that even thirty-six horses have difficulty in moving one of the German 42's, this conclusion was reasonable enough, explained a Dutch artillery officer, but neither General Brialmont nor the French engineers could foresee that motor traction would make such tremendous progress since the forts they built were planned.

That the Germans and Austrians have moved their 42's and 35's, respectively, by horses is a fact. But this seems to have been done in terrain where the roads permitted of no other course. Invariably they are moved by powerful traction engines, which in addition to the piece itself pull from three to four caissons. Recently a type of traction engine, known as the "caterpillar" has been observed, for use on bad roads and across plowed fields. In addition both the German and Austrian heavy pieces are mounted on a carriage, the wheels of which are fitted with flanges for use on the railroads. Whether or not this latter device has been suggested by the war cannot be said, but a few days ago several heavy German batteries were taken in this manner over the Belgian railroads, the road tractor running on the rails also. Ordinary railroad cars trailing behind the caissons carried the personnel of the batteries.

What sort of explosives the Germans use in the 42-centimetre shells is still a mystery. French officers of forts bombarded by the Germans maintain that the charge of the projectile is melinite, but others have expressed the opinion that the explosive is something entirely new and that the gases formed by it have even greater expansion than those of nitro-glycerine, the strongest high explosive known. There is no doubt that the vapors of the explosive have a violent toxic effect and nothing but a strong application of oxygen will revive those succumbing to them.

The German 42 is made with two barrels—a long one for flat range fire, and a short one for high-angle fire. In the former the ballistic charge is necessarily much stronger, and with a projectile weighing from 1600 to 1800 pounds the pressure exerted by the explosion upon the chamber walls cannot be less than 180 tons to the square inch, it is said. The high-angle mortar, 42, requires a slightly smaller propelling charge. The long-barrelled gun is used against the faces offered by fortifications, while the mortar drops its shells from a high elevation into the fort or redoubt. Their sight ranges are said to be, respectively, eight and five kilometres, while according to the Koelnische Zeitung the flight of the shell exceeds twelve and ten kilometres. The flight of both shells is attended by a number of interesting aerial phenomena, which so far have been merely hinted at by German experts. One of them, however, is that the gases of the chamber explosion travel ahead of the projectile for a long distance, but that in the end they are left behind by the shell, first the one and then the other having the greater speed, an indication, it is seriously maintained, that the vacuum created by the gases tend to not only support the flight of the huge mass of steel charge, but that they actually accelerate it. At about 2000 meters the shell leaves the company of the gases. Odd as it must seem the photographic experiments demonstrating this were made by a German ordnance expert during the bombardment of Namur. Such at least is the claim of the German press, which treats the results obtained very guardedly.

It is of interest to learn that the German 42 and the Austrian 35 are sighted or trained by means of what is known as the Morris tube, an American invention used in instruction practice in the United States navy. The tube in question lies along the barrel and fires a one-pound shell—weight and charge being in exact proportions to the weight of the projectile and capacity of charge of the main barrel. A trail of smoke shows the path of the one-pound shell and so establishes more or less accurately what the tracetory course of the 1600-pound projectile will be. When the piece has been "shot in" by means of the tube the actual charge is fired, with what results Liege, Namur, Givet, Manonvillers, Longwy and Montmedy will attest.

PRACTICAL STUDIES ARE POPULAR

Vocational Training Classes Are Crowded With Ambitious Boys and Girls

The vocational training idea is meeting with favor in all parts of the Territory. H. W. Kinney, superintendent of public instruction, said yesterday that where these courses have been started the classes are overwhelmingly large.

Extra Work Popular

R. C. Bowman, vocational instructor for Maui, reporting recently on the progress of the work since the adoption of the rule that this course should be given outside of school hours, stated: "We talked with the principals of the schools and to the boys and what at first seemed an impossibility developed into a possibility and so looks as if it would be better than the old arrangement of classes in the regular school time.

"More boys expressed their desire to take the work outside of regular school hours than I really think I can handle. Some of them had yet to see their parents. Others were not sure they could stay on account of Japanese school. In some cases so far the Japanese teachers have expressed willingness to let the boys from their school one morning or afternoon a week."

Mr. Kinney said that there are over 100 enrollments for the sewing class to be opened at the Central Grammar School next Monday. The teachers thought that a dozen or so might take the work.

Courses Extended

Last year a vocational training course was given at the Kaiulani School in Honolulu and at the Hilo High School. The work has been extended this year to Liliuokalani, Kaahumanu, Kalihi-waena and Central Grammar schools here, to the Olaa, Papaikou and Honomu schools on Hawaii and to the Lihue High School. The Royal School is not included because there is no building available.

Prof. Edgar Wood has opened an evening class for vocational training work at the Normal School and has interested quite a handful of boys, fifteen years old and above in making better use of their time than spending it on the streets.

REGISTRATION BIG ON ALL ISLANDS

A. L. Case, supervising principal of the Maui schools, reports the enrollment for that Island, as follows:

Lahaina District

School.	Date Reported.	Enrollment.
Olowalu,	Sept. 30	93
Kamehameha III.,	Sept. 26	406
Puukolii,	Sept. 25	82
Lanaikai,	Oct. 3	31
Honokohua	Oct. 1	27
Honokohau,	Sept. 30	25
Total		659

Wailuku District

Kuhakuloa,	Sept. 30	25
Waihee,	Oct. 17	149
Wailuku,	Oct. 12	280
Waikapu,	Sept. 30	23
Kihei,	Sept. 30	76
Kahului,	Oct. 5	74
Spreckelsville,	Sept. 30	195
Puunui,	Sept. 25	365
Keahua,	Sept. 30	101
Total		1288

Makawao District

Kealahou,	Sept. 29	139
Keokea,	Oct. 4	140
Ulupalakua,	Sept. 24	28
Makena,	Oct. 2	24
Makawao,	Sept. 26	157
Kaupakulua,	Oct. 1	87
Halehaku,	Sept. 30	29
Huelo,	Sept. 25	39
Kuiaha,	Oct. 1	17
Haiku,	Sept. 29	174
Hamakuapoko,	Oct. 5	224
Paia,	Sept. 29	323
Total		1381

Hana District

Eight schools totaled		537

Molokai District

Five schools totaled		169
Total registration for Maui		3497

On October 16 the enrollment of the Hilo Union School group was as follows:

Waiakea-Uka	31
Waiakea-Kai	256
Haaheo	117
Hilo Union	822
Total	1226

HEALTH CONTROL IS EDUCATION

Public opinion appears to have accepted health supervision as a part of the sound basis of the social purpose of education. Health is, above all, the educational system, presumably on socializing in its influence, since in respect to it the welfare of each individual is in a literal sense the welfare of all. Easy as this realization seems, in practice it has come very slowly, only under stress of public necessity, and even now the belief in school hygiene as a practical function of school work is by no means as well accepted in practice as in theory.

George S. Raymond, school inspector, is visiting Hilo and the schools on the Big Island. He is scheduled to deliver a lecture on school topics at a meeting of the Teachers' Union tonight. He will also devote some time to explaining the new courses to the teachers in the Hawaii county schools.